



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,872	01/16/2004	Te-Chen Chu	14184 B	8430

36672 7590 07/01/2005
CHARLES E. BAXLEY, ESQ.
90 JOHN STREET
THIRD FLOOR
NEW YORK, NY 10038

EXAMINER

MULLER, BRYAN R

ART UNIT	PAPER NUMBER
----------	--------------

3723

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/759,872

Applicant(s)

CHU, TE-CHEN

Examiner

Bryan R. Muller

Art Unit

3723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☒ Claim(s) 1-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 301 and 40 (both for protruded ears), 29 (trough) and 80 (compartment). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms, which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. It appears that the specification (including abstract and claims) is a direct translation from a foreign language and is replete with

grammatical and idiomatic errors. The specification must be corrected to clearly define and explain the invention in proper English.

3. A substitute specification excluding the claims is required pursuant to 37 CFR 1.125(a) because the specification is unclear and appears to be a literal translation into English from a foreign document and is replete with grammatical and idiomatic errors. A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

4. The disclosure is objected to because of the following informalities: Along with the above mentioned grammatical errors and idiomatic English, the reference numbers "274" and "275" are referred to as a control spring and a pressing piece, respectively in lines 5 and 6 on page 4 of the specification and are referred to as pressing elements in line 9 of page 4, also reference number "11" is referred to as ratchet teeth on pages 3 and 4 of the specification but is referred to as a gear in line 13 of page 6 of the

Art Unit: 3723

specification. Each reference numeral should only represent one part in the drawings.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

7. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 recites a "second compartment" but there is no first compartment recited in claim 5 or either of claims 1 or 3 that claim 5 may depend upon. As best understood, the "second compartment" of claim 5 will be considered to be "a compartment".

Claim Rejections - 35 USC § 103

Art Unit: 3723

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiang (6,457,386) in view of Lewis (1,324,258).

10. In reference to claim 1, Chiang discloses a wrench with two kinds of torque output mainly comprising a ratchet head structure which by its rotating mechanism and control, allows the wrench to rotate idly, change its rotating directions, or to make said ratchet head rotate in one direction by rotation of said wrench, a sleeve socket (212) and a transmission gear (221) disposed inside to transmit two ring-shaped gears (27 and 27') disposed inside said sleeve socket, said transmission gear is connected to a handle part (22), said handle part having a long shaft sleeved on its outer circumference (211), accordingly, said wrench can be driven by conventional torque of the wrench or rotating said handle part. Chiang however, fails to disclose that the wrench has a swing head structure wherein the head structure (sleeve socket) has a first protruded ear with a medium gear disposed on one side to transmit torque from a gear of a handle structure to a gear of the head structure (sleeve socket), a shaft structure with a second protruded ear for sleeving on the first protruded ear of the head structure (sleeve socket) such that the first and second protruded ears can pivot with respect to one another and a transmission gear disposed inside the handle structure that meshes with the medium gear to transmit torque through the medium gear to the transmission gear

of the head structure (sleeve socket). Lewis discloses a ratchet type wrench that has a swing head structure that allows the handle to pivot with respect to the driving head structure wherein the wrench is driven by rotating the handle and Lewis teaches that the swing head structure allows the wrench to be used in close quarters such as in corners or against partitions or may be used in the ordinary manner (col. 1, lines 16-20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the wrench of Chiang with a swing head structure similar to that of the Lewis invention to allow the Chiang invention to be used in close quarters such as in corners or against partitions. Therefore, the addition of the swing head structure to the wrench of Chiang would provide the sleeve socket (212 of Chiang) with a first protruded ear (31 of Lewis) having a medium gear (35 and 36 of Lewis) disposed on both sides to transmit torque from the gear (37 of Lewis) of the handle structure (22 and 29 of Chiang or 10, 12 and 13 of Lewis) to a gear (38 of Lewis) of the sleeve socket, a shaft structure (13 of Lewis) with a second protruded ear (30 of Lewis) for sleeving on the first protruded ear of the sleeve socket such that the first and second protruded ears can pivot with respect to one another and a transmission gear (37 of Lewis or 221 of Chiang) disposed inside the handle structure that meshes with the medium gear to transmit torque through the medium gear to the transmission gear of the head structure (sleeve socket).

11. In reference to claim 5, the addition of a swing head structure to the wrench of Chiang will further provide that the first protruded ear (31 of Lewis) attached to the sleeve socket of said head structure will have a compartment disposed in it for placing a

Art Unit: 3723

medium gear (35 of Lewis), said sleeve socket having a transmission gear (38 of Lewis) inside for transmitting two ring-shaped gears (27 and 27' of Chiang) which are also disposed inside said sleeve socket, said medium gear inside said compartment of said protruded piece transmits a gear (37 of Lewis) of said shaft structure (13 of Lewis) and a gear (38 of Lewis or 221 of Chiang) of said sleeve socket, said second protruded ear (30 of Lewis) disposed at the front end of said shaft structure is for sleeving onto said protruded piece of said sleeve socket, as discussed supra, said protruded ears are bolted (32 of Lewis) and can be pivotally rotated, a transmission gear (37 of Lewis) is disposed inside said shaft structure to mesh with said medium gear, said transmission gear is connected to said handle part (12 and 13 of Lewis), said handle part having a long shaft (10 of Lewis) sleeved on its outer circumference. The sleeve socket transmission gear (38) of Lewis would inherently have teeth on both sides to receive the torque from the medium gear and transmit the torque to the two ring-shaped gears of Chiang in the same manner as gear 221 of Chiang does in the Chiang invention.

12. In reference to claim 6, Chiang further discloses that the head structure of the wrench has two positioning troughs (252) for placing two locking pieces (24 and 25) and a hole for inserting an initiating piece (262), said locking pieces each having a positioning trough (252) on their inner ends and said initiating piece having a positioning ball (R) and an elastic element (S2) corresponding to said positioning trough, the initiating piece being rotated and adjusted with a wheel (28) to make the locking pieces swing in an opposite direction, said locking pieces each having ring-shaped gear wheels (27 and 27') disposed on their outer parts, the ring-shaped gear wheel having inner

ratchet teeth (271 and 271') for meshing in opposite transmission directions with an inclined wheel (221) disposed on top of a transmission shaft (222 of Chiang or 38 of Lewis), said locking pieces having outer ratchet teeth (241) on their outer ends.

13. In reference to claim 7, Chiang also discloses that the ratchet head may alternatively have a switch-control (18), two elastic elements (16) and two steel balls (185) and springs (184) wherein said elastic elements can limit a circular rod (17) while said steel balls and springs press against a piece (153) with ratchet teeth (152) disposed on its side and ring-shaped gears (14 and 14') disposed on its upper and bottom ends.

14. Claims 3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiang (6,457,386) in view of Lewis (1,324,258) and further in view of Lyon (2,791,142).

15. In reference to claim 3, the addition of the swing head structure of Lewis to the wrench with two kinds of torque output of Chiang anticipates claims 1 and 5-7, as discussed supra but fails to anticipate claim 3. Lyon discloses an angularly adjustable wrench wherein the structure of the swing head section is very similar to that of Lewis, including a first and second protruded ear structures (12 and 14), medium gears (34 and 35) that transfers torque from a gear (32) attached to the handle structure (22) to a transmission gear (33) within the head structure that drives the socket and a long shaft (10) sleeved over the handle structure. The only difference between the basic swing head structure of the Lyon invention and the Lewis invention is that the first protruded

ear (12 of Lyon) is sleeved on the second protruded ear (14) of the head structure but the swing heads of Lewis and Lyon both function the same. Thus, it would be obvious to one of ordinary skill in the art at the time the invention was made that the addition of a swing head structure to the wrench of Chiang would function the same if the first protruded ear is sleeved over the second protruded ear or if the second protruded ear is sleeved over the first protruded ear.

16. Claims 5-7 are anticipated by the addition of the swing head structure of Lewis or Lyon to the wrench of Chiang, as discussed supra.

17. Claims 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chiang (6,457,386) in view of Lewis (1,324,258) as applied to claim 1 and further in view of Chen (U.S. Pub No. 2003/0015070) and Lan (6,220,125).

18. The obvious combination of Chiang and Lewis, as discussed supra, fails to disclose that the first protruding ear of the head structure has a plurality of concave dots disposed on its side, a steel ball disposed on one side of the second protruded ear of the handle corresponding to said concave dots and a switch control for controlling the steel ball. Lewis does however disclose a switch control for locking the angle of the swing head structure and Chen discloses a swing head structure wherein that the first protruding ear (21) of the head structure has a plurality of concave dots (24) disposed on its side and a steel ball (60) disposed on one side of the second protruded ear of the handle corresponding to said concave dots. Lan further discloses a swing head structure for a wrench wherein the first protruding ear of the head structure has a

plurality of concave dots disposed on it and a steel ball is disposed on the second protruded ear of the handle corresponding to said concave dots with a switch control for controlling the steel ball. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the locking mechanism of Lewis may be replaced with a plurality of concave dots disposed on the side of the first protruding ear, a steel ball and a switch control for controlling the steel ball disposed on one side of the second protruded ear of the handle corresponding to said concave dots. This locking mechanism would be preferable over the locking mechanism of Lewis because it requires less moving parts and a smaller amount of material to produce, thus reducing cost and reducing the possibility of part failure.

19. Claims 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chiang (6,457,386) in view of Lewis (1,324,258) and Lyon (2,791,142) as applied to claim 3 and further in view of Chen (U.S. Pub No. 2003/0015070) and Lan (6,220,125).

20. It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the locking apparatus of Lewis or Lyon with a plurality of concave dots disposed on the side of a protruding ear, a steel ball disposed on one side of the other protruded ear corresponding to said concave dots and a switch control for controlling the steel ball, as discussed supra, but in this case the plurality of concave dots would be located on the side of the second protruding ear of the handle and the steel ball and switch control would be located on the side of the first protruding ear of

Art Unit: 3723

the head structure because the switch would need to be on the outer of the two protruding ears for it to be accessible to the operator.

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wisbey (6,070,499) and Chu (6,311,584) both disclose wrenches with two kinds of torque output and Mercer (4,296,654) and Izumisawa (5,784,934) both disclose swing head structures similar to those of Lewis and Lyon, as discussed supra.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan R. Muller whose telephone number is (571) 272-4489. The examiner can normally be reached on Monday thru Thursday and second Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J. Hail III can be reached on (571) 272-4485. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3723

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BRM
6/14/2005



Joseph J. Hail, III
Supervisory Patent Examiner
Technology Center 3700